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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Shrader et al.

Serial No.: 09/697,264

Filed: 10/26/2000

For: Method and system for
Web-based DCE management

§ Group Art Unit: 2174

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§ Examiner: Sax, S.

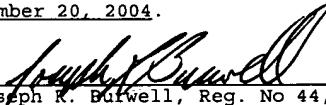
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§ Atty Docket #: AUS9-1997-0113-US2

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APPELLANT'S BRIEF
IN RESPONSE TO OFFICE ACTION UNDER 37 C.F.R. § 1.192

10 This brief is filed in triplicate in support of the previously filed Notice of Appeal, which was filed 05/18/2004, and which appealed from the decision of the examiner dated 01/14/2004 rejecting claims 1-18. The fee required under 37 C.F.R. § 1.17(c) for filing a brief in support of an appeal is
15 provided in the Transmittal of Appeal Brief filed herewith.

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1. **REAL PARTY IN INTEREST**

The real party in interest in this appeal is International Business Machines Corporation (IBM).

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2. **RELATED APPEALS AND INTERFERENCES**

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on 10 the Board's decision in the pending appeal, there are no such appeals or interferences.

3. **STATUS OF CLAIMS**

15 Claims 1-18 are pending in this application; claims 1-18 have been finally rejected; claims 1-18 have been appealed. No claims have been canceled, withdrawn, or allowed after final.

4. **STATUS OF AMENDMENTS**

20 No after-final amendments have been filed.

5. SUMMARY OF INVENTION

A frames-based Web browser is used with existing distributed computing environment (DCE) interfaces to facilitate and simplify management of DCE cells. In the preferred embodiment, administration may be performed from any secure Web browser acting as a client. Management data is typically supported on a target Web server. At the browser, CGI scripts are used to dynamically generate HTML (hypertext markup language) pages based on the network administrator's selections and the current state and defined objects in the DCE cell. The result is a robust and efficient Web-based DCE management scheme. More specifically, a logon page allows an administrator to log into the cell that includes the target Web server (Specification, page 10, line 14). After logon, the administrator proceeds to a DCE Web Administration main menu from which a number of management actions may be launched including DCE command line operations (using the DCECP function), server status inquiries, and "fast path" tasks (Page 10, line 25). Hyperlink references are provided to facilitate navigation options (Page 11, line 19). From the DCECP Commands hyperlink, the administrator proceeds to a table display of the main functions available in DCECP (Page 12, line 26), which include registry groupings of principals, groups, organizations and accounts. Management functions are facilitated using a dual frame display whenever information is input by the administrator in one frame while management data is simultaneous output in another frame. This frame technique maximizes interaction and feedback to the administrator, who would otherwise have to switch back and forth between the forms page and the output page to analyze the impact of administrative actions using the DCECP command functions.

6. ISSUES

The issues on appeal are:

5 whether claims 1-18 are unpatentable under 35 U.S.C. § 102(e) as being anticipated by Rich et al., "Method and apparatus for enabling a web server to impersonate a user of a distributed file system to obtain secure access to supported web documents", U.S. Patent No. 5,918,228, filed 01/28/1997, issued 06/29/1999.

10 7. GROUPING OF CLAIMS

The entire set of claims do not stand or fall together but are grouped as follows:

15 (A) Claims 1, 7, and 13 stand or fall together;
(B) Claims 2, 8, and 14 stand or fall together;
(C) Claims 3, 9, and 15 stand or fall together; and
(D) Claims 4-6, 10-12, and 16-18 stand or fall together.

20 8. ARGUMENTS

8.A. Was 35 U.S.C. § 102(e) properly applied in a rejection of claims 1-3, 7-9, and 13-15 as being anticipated by Rich et al.?

25 Independent claim 1 is directed to a method, whereas independent claim 7 is directed to a corresponding apparatus, and independent claim 13 is directed to a corresponding computer program product. Since claim 1 is broader than the other claims, claim 1 is used herein as an exemplary claim.

30 Rich et al. is a patent to International Business Machines (IBM), and IBM is the assignee of the present patent application. In addition, Rich et al. has at least one common inventor with

the present patent application, and both Rich et al. and the present patent application concern Web-technology-based solutions to problems that are related to distributed computer environment (DCE) cells. Hence, the detailed description within Rich et al. 5 clearly discloses some features that are also disclosed within the specification of the present patent application. In particular, Rich et al. discloses the use of a Web server to impersonate a user and obtain security credentials from a DCE security service so that a user at a client can access and view 10 files from a distributed file system within a DCE. In a similar manner, the present invention also comprises a Web server that interacts with a DCE security service for the benefit of a user at a client.

However, the disclosure of the present patent application 15 teaches features that are not disclosed within Rich et al., and the present patent application contains claims for features that are not taught in Rich et al., notwithstanding the anticipation rejection that argues to the contrary. Appellant asserts that 20 there is more than one element of the independent claims that is not shown in Rich et al., thereby causing the anticipation rejection to be deficient.

In particular, independent claim 1 of the present application contains the following features: "responsive to user actions, displaying a plurality of Web pages in the browser from 25 which the authenticated user manages the distributed computing environment" and "managing the distributed computing environment cell from the Web browser". Although Rich et al. discloses the display of Web pages in a browser in which the Web pages have information from a DCE cell, Rich et al. does not disclose the 30 ability to allow an authenticated user to manage the DCE cell from the Web browser, as required by the third element of claim

1, particularly using the plurality of displayed Web pages within the Web browser, as required by the second element of claim 1.

Appellant asserts that the rejection incorrectly argues the opposite when the rejection states that these features are shown in column 5, line 40, to column 6, line 15. The following portion (column 5, line 37, to column 6, line 20) of Rich et al. states (emphasis added):

The control flow associated with the invention is illustrated in the process flow diagram of FIG. 3. This figures illustrates the basic system of FIG. 1, with the inclusion of an account manager 56 having an associated database 58. Session manager 27 starts up upon initialization of the Web server and is preferably run by the workstation computer 18. It includes its own storage area 29 for reasons to be discussed below. When the client 10 (through the browser 16) requests a DFS document (step a), the Web server 18 invokes a server path check (using the SAF plug-in 25) (step b). The PathCheck checks with the session manager 27 to determine whether the user has appropriate DCE credentials. If not (step c), the SAF plug-in 25 will return an error message (e.g., "401; Unauthorized") to the browser 16 (step d) and prompt the user for user id and password. After getting the userid and password from the user (step e), the SAF plug-in invokes the session manager 27 (step f) to obtain the DCE credential for the user. Session manager 27 returns the DCE credential to the Web server (step g). The server then uses this user credential to represent the user to retrieve documents stored in DFS 50 (step h). After retrieving the documents, the account manager 56 is invoked (step i) (preferably using another API plug-in) to save appropriate usage information into the database 58 (step j).

The session manager 27 is thus invoked by the Web Server when a user attempts to access a DFS file. If a user has already been authenticated by DCE, the Session Manager 27 returns the user credential to the server, which uses this credential to retrieve DFS documents on behalf of the user. If not, the Session Manager 27 will login for the user and obtain the credential from DCE Security. The Session Manager maintains the in-memory database 29 to keep track of which user has logged in so that a user may access multiple DFS pages.

A detailed flowchart showing the operation provided by the Server Application Function (SAF) plug-in 25 and the session manager process 27 of the present invention is now illustrated in FIGS. 4-5. In general, it should be appreciated that the invention enables the Web server process 22 to impersonate a DCE identity. The method begins when a DCE principal name (actually the account name) first shows up at the Web server platform 12. In particular, at step 60, the routine passes the account name and password to the session manager for login request processing. FIG. 5 illustrates the process in detail. At step 61, a test is made to determine whether the account name and password are already in the session manager database 29. If the outcome of the test at step 61 is positive, the user has already been authenticated and the subroutine continues at step 64 to return the user's credentials to the calling process.

At most, Rich et al. discloses the display of Web pages within a client browser, wherein the Web pages have been retrieved from a storage location within a DCE cell. However, Rich et al. does not disclose managing the DCE cell through the client browser.

25 Therefore, Rich et al. does not disclose at least one element of independent claim 1 as is required for a proper anticipation rejection. As stated at MPEP § 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Hence, the rejection of claim 1 is improper, and Appellant requests that the rejection should not be upheld on appeal.

8.B. Was 35 U.S.C. § 102(e) properly applied in a rejection
of claims 2, 8, and 14 as being anticipated by Rich et al.?

5 Dependent claim 2 is directed to a method, whereas dependent
claim 8 is directed to a corresponding apparatus, and dependent
claim 14 is directed to a corresponding computer program product.
Since claim 2 is broader than the other claims, claim 2 is used
herein as an exemplary claim.

10 Claim 2 depends from independent claim 1. Appellant has
argued hereinabove that claim 1 is not anticipated by Rich et al.
because Rich et al. fails to disclose the following features in
claim 1: "responsive to user actions, displaying a plurality of
Web pages in the browser from which the authenticated user
manages the distributed computing environment" and "managing the
15 distributed computing environment cell from the Web browser". As
part of Appellant's arguments in the response to the non-final
Office action, Appellant had also argued that these features in
claim 1 were not anticipated by Rich et al., and in so doing,
Appellant had slightly paraphrased the claim language in the
20 prose of Appellant's argument. In particularly, Appellant stated
that "Rich et al. does not disclose the feature of allowing a user
to manage the DCE cell from within the Web page in the Web
browser". In response, the final Office action stated that
independent claim 1 does not recite the limitation of "within the
25 Web page"; therefore, Appellant's argument was dismissed or
discounted. Although it is true that claim 1 does not include
the phrase "within the Web page", the same dismissal cannot be
made of the language within claim 2, which is significant to the
patentability of claim 2 as discussed hereinbelow.

30 Assuming arguendo that independent claim 1 is anticipated by
Rich et al., the same argument clearly cannot be made with

respect to claim 2. Dependent claim 2 depends from claim 1. Rewriting claim 2 in independent form, an exemplary version of independent claim 2 would recite the following features:

5 2. A method of effecting management tasks in a distributed computing environment cell having at least one Web client with a browser connectable to a Web server, the distributed computing environment including a security service, comprising the steps of:

10 authenticating a user of the Web client by returning a credential from the security service, wherein upon authentication of the user, an administration main menu Web page of the sequence of Web pages is displayed;

15 responsive to user actions, displaying a plurality of Web pages in the browser from which the authenticated user manages the distributed computing environment cell; and

 managing the distributed computing environment cell from the Web browser.

20 By including the feature of an administration main menu Web page, claim 2 is more specifically directed to a system that provides the ability for an authenticated user to manage the DCE cell from within a Web page that is displayed within the Web browser.

25 The rejection states that the feature of an administration main menu web page is disclosed at column 6, lines 7-19 of Rich et al.. However, this portion of Rich et al. is copied hereinabove, and it is clear that Rich et al. does not disclose anything equivalent or analogous to an administration main web page, notwithstanding the argument in the rejection to the contrary.

30 Therefore, Rich et al. does not disclose at least one element of dependent claim 2 as is required for a proper

anticipation rejection. As stated at MPEP § 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 5 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 10 1989). Hence, the rejection of claim 2 is improper, and Appellant requests that the rejection should not be upheld on appeal.

8.C. Was 35 U.S.C. § 102(e) properly applied in a rejection of claims 3, 9, and 15 as being anticipated by Rich et al.?

15 Dependent claim 3 is directed to a method, whereas dependent claim 9 is directed to a corresponding apparatus, and dependent claim 15 is directed to a corresponding computer program product. Since claim 3 is broader than the other claims, claim 3 is used 20 herein as an exemplary claim.

Claim 3 depends from dependent claim 2, which depends from independent claim 1. Appellant has argued hereinabove that claims 1 and 2 are not anticipated by Rich et al. because Rich et al. fails to disclose the features of claims 1 and 2, particularly the following features in claim 1: "responsive to user actions, displaying a plurality of Web pages in the browser from which the authenticated user manages the distributed computing environment" and "managing the distributed computing environment cell from the Web browser". As part of Appellant's 25 arguments in the response to the non-final Office action, Appellant had also argued that these features in claim 1 were not 30

anticipated by Rich et al., and in so doing, Appellant had slightly paraphrased the claim language in the prose of Appellant's argument. In particular, Appellant stated that "Rich et al. does not disclose the feature of allowing a user to 5 manage the DCE cell from within the Web page in the Web browser". In response, the final Office action stated that independent claim 1 does not recite the limitation of "within the Web page"; therefore, Appellant's argument was dismissed or discounted. Although it is true that claim 1 does not include the phrase 10 "within the Web page", the same dismissal cannot be made of the language within claim 3, which is significant to the patentability of claim 3 as discussed hereinbelow.

Assuming *arguendo* that independent claim 1 is anticipated by 15 Rich et al., the same argument clearly cannot be made with respect to claim 3. Claim 3 depends from dependent claim 2, which depends from independent claim 1. Rewriting claim 3 in independent form, an exemplary version of independent claim 3 would recite the following features:

20 3. A method of effecting management tasks in a distributed computing environment cell having at least one Web client with a browser connectable to a Web server, the distributed computing environment including a security service, comprising the steps of:

25 authenticating a user of the Web client by returning a credential from the security service, wherein upon authentication of the user, an administration main menu Web page of the sequence of Web pages is displayed, wherein the administration main menu Web page includes hypertext links 30 associated with management command options;

responsive to user actions, displaying a plurality of
Web pages in the browser from which the authenticated user
manages the distributed computing environment cell; and
managing the distributed computing environment cell
5 from the Web browser.

By including the feature of an administration main menu Web page
that contains hypertext links that are associated with management
command options, claim 3 is more specifically directed to a
10 system that provides the ability for an authenticated user to
manage the DCE cell from within a Web page that is displayed
within the Web browser.

The rejection states that the feature in claim 3 is
disclosed by the fact that it is "inherent within web browsers to
15 use hypertext links" and at column 8, lines 18-45 of Rich et al.,
which reads at column 8, lines 15-48, as follows:

In addition, although the various methods described are
conveniently implemented in a general purpose computer
selectively activated or reconfigured by software, one of
20 ordinary skill in the art would also recognize that such
methods may be carried out in hardware, in firmware, or in
more specialized apparatus constructed to perform the
required method steps.

Further, although the invention has been described in
25 terms of a preferred embodiment in a specific distributed
file system environment, those skilled in the art will
recognize that the invention can be practiced, with
modification, in other and different hardware and operating
system architectures with the spirit and scope of the
30 appended claims. Thus, for example, while the present
invention is preferably implemented to allow off-the-shelf
browsers to access Web documents stored in DFS, the
principles of the invention are equally applicable with
other known architectures such as AFS (from which DFS was
35 derived), as well as the Network File System (NFS) developed
by Sun Microsystems. Moreover, implementation in OSF DCE is
not a requirement of the present invention either.

5 Further, it should be appreciated that the browser, Web server and distributed file system architecture in which the present invention is implemented can be generalized as well. In particular, the Web server may be thought of as merely a "gateway" function to provide one or more users (the Web clients in the context of the invention) access to resources in some "environment" (e.g., the distributed file system) that may or may not be on a different machine. Thus, the present invention can be seen to provide an efficient way for any gateway function to rapidly modulate between the identities that it presents to the user (from the view of the user-space) and to the environment (from the view of the environment kernel).

10 15 It is clear that this portion of Rich et al. does not disclose anything equivalent or analogous to an administration main web page containing hypertext links that are associated with management command options, notwithstanding the argument in the rejection to the contrary.

20 Therefore, Rich et al. does not disclose at least one element of dependent claim 3 as is required for a proper anticipation rejection. As stated at MPEP § 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a 25 single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 30 1989). Hence, the rejection of claim 3 is improper, and Appellant requests that the rejection should not be upheld on appeal.

8.D. Was 35 U.S.C. § 102(e) properly applied in a rejection of claims 4-6, 10-12, and 16-18 as being anticipated by Rich et al.?

5 Dependent claims 4-6 are directed to a method, whereas dependent claims 10-12 are directed to a corresponding apparatus, and dependent claims 16-18 are directed to a corresponding computer program product. In addition, dependent claims 5 and 6 depend from claim 4. Since claim 4 is broader than the other 10 claims, claim 4 is used herein as an exemplary claim.

Claim 4 depends from claim 3, which depends from dependent claim 2, which depends from independent claim 1. Appellant has argued hereinabove that claims 1, 2, and 3 are not anticipated by Rich et al. because Rich et al. fails to disclose the features of 15 claims 1, 2, and 3, particularly the following features in claim 1: "responsive to user actions, displaying a plurality of Web pages in the browser from which the authenticated user manages the distributed computing environment" and "managing the distributed computing environment cell from the Web browser". As 20 part of Appellant's arguments in the response to the non-final Office action, Appellant had also argued that these features in claim 1 were not anticipated by Rich et al., and in so doing, Appellant had slightly paraphrased the claim language in the prose of Appellant's argument. In particularly, Appellant stated 25 that "Rich et al. does not diclose the feature of allowing a user to manage the DCE cell from within the Web page in the Web browser". In response, the final Office action stated that independent claim 1 does not recite the limitation of "within the Web page"; therefore, Appellant's argument was dismissed or 30 discounted. Although it is true that claim 1 does not include the phrase "within the Web page", the same dismissal cannot be

made of the language within claim 4, which is significant to the patentability of claim 4 as discussed hereinbelow.

Assuming *arguendo* that independent claim 1 is anticipated by Rich et al., the same argument clearly cannot be made with respect to claim 4. Dependent claim 4 depends from claim 3, which depends from claim 2, which depends from claim 1.

Rewriting claim 4 in independent form, an exemplary version of independent claim 4 would recite the following features:

10 4. A method of effecting management tasks in a distributed computing environment cell having at least one Web client with a browser connectable to a Web server, the distributed computing environment including a security service, comprising the steps of:

15 authenticating a user of the Web client by returning a credential from the security service, wherein upon authentication of the user, an administration main menu Web page of the sequence of Web pages is displayed, wherein the administration main menu Web page includes hypertext links associated with management command options;

20 responsive to user actions, displaying a plurality of Web pages in the browser from which the authenticated user manages the distributed computing environment cell; and

25 managing the distributed computing environment cell from the Web browser, wherein the step of managing the distributed computing environment cell is initiated by selecting one of the hypertext links associated with a management command option.

30 By including the feature of an administration main menu Web page that contains hypertext links that are associated with management

command options such that the step of managing the distributed computing environment cell is initiated by selecting one of the hypertext links associated with a management command option, claim 4 is much more specifically directed to a system that 5 provides the ability for an authenticated user to manage the DCE cell from within a Web page that is displayed within the Web browser.

The rejection states that the feature in claim 4 is disclosed by the fact that selecting links is "inherent in a 10 browser. Clearly, the claim language recites much more than is purported by the rejection. More importantly, it is clear that Rich et al. does not disclose anything equivalent or analogous to the feature of an administration main menu Web page that contains hypertext links that are associated with management command 15 options such that the step of managing the distributed computing environment cell is initiated by selecting one of the hypertext links associated with a management command option, notwithstanding the argument in the rejection to the contrary.

Therefore, Rich et al. does not disclose at least one 20 element of dependent claim 4 as is required for a proper anticipation rejection. As stated at MPEP § 2131: "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of 25 California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Hence, the rejection of claim 4 is improper, and 30 Appellant requests that the rejection should not be upheld on appeal.

9. Conclusion

5 In view of the above arguments, it is respectfully urged
that the rejection of the claims should not be sustained.

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Respectfully submitted,


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10. APPENDIX OF CLAIMS

1. A method of effecting management tasks in a distributed
5 computing environment cell having at least one Web client with a
browser connectable to a Web server, the distributed computing
environment including a security service, comprising the steps
of:

10 authenticating a user of the Web client by returning a
credential from the security service;
responsive to user actions, displaying a plurality of Web
pages in the browser from which the authenticated user manages
the distributed computing environment cell; and
managing the distributed computing environment cell from the
15 Web browser.

2. The method of claim 1 wherein upon authentication of the
user, an administration main menu Web page of the sequence of Web
pages is displayed.

20 3. The method of claim 2 wherein the administration main menu
Web page includes hypertext links associated with management
command options.

4. The method of claim 3 wherein the step of managing the distributed computing environment cell is initiated by selecting one of the hypertext links associated with a management command option.

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5. The method of claim 4 wherein the management command option calls a fast path task Web page from which the authenticated user performs multiple step administrative tasks with a single action.

10 6. The method of claim 4 wherein the management command option calls a server status Web page from which the authenticated user may view server status information.

7. An apparatus for effecting management tasks in a distributed computing environment cell having at least one Web client with a browser connectable to a Web server, the distributed computing environment including a security service, the apparatus comprising:

authenticating means for authenticating a user of the Web client by returning a credential from the security service;

10 first displaying means for displaying, responsive to user actions, a plurality of Web pages in the browser from which the authenticated user manages the distributed computing environment cell; and

managing means for managing the distributed computing environment cell from the Web browser.

15 8. The apparatus of claim 7 wherein the first displaying means further comprises:

second displaying means for displaying, upon authentication of the user, an administration main menu Web page of the plurality of Web pages.

20 9. The apparatus of claim 8 wherein the administration main menu Web page includes hypertext links associated with management command options.

10. The apparatus of claim 9 further comprising:

initiating means for initiating management of the
distributed computing environment cell by selecting one of the
5 hypertext links associated with a management command option.

11. The apparatus of claim 10 wherein the management command

option calls a fast path task Web page from which the
authenticated user performs multiple step administrative tasks
10 with a single action.

12. The apparatus of claim 10 wherein the management command

option calls a server status Web page from which the
authenticated user may view server status information.

15

13. A computer program product on a computer readable medium for
use in a data processing system for effecting management tasks in
a distributed computing environment cell having at least one Web
client with a browser connectable to a Web server, the
5 distributed computing environment including a security service,
the computer program product comprising:

instructions for authenticating a user of the Web client by
returning a credential from the security service;

instructions for displaying, responsive to user actions, a
10 plurality of Web pages in the browser from which the
authenticated user manages the distributed computing environment
cell; and

instructions for managing the distributed computing
environment cell from the Web browser.

15
14. The computer program product of claim 13 wherein the
instructions for displaying further comprise:

instructions for displaying, upon authentication of the
user, an administration main menu Web page of the plurality of
20 Web pages.

15. The computer program product of claim 14 wherein the administration main menu Web page includes hypertext links associated with management command options.

5 16. The computer program product of claim 15 further comprising: initiating means for initiating management of the distributed computing environment cell by selecting one of the hypertext links associated with a management command option.

10 17. The computer program product of claim 16 wherein the management command option calls a fast path task Web page from which the authenticated user performs multiple step administrative tasks with a single action.

15 18. The computer program product of claim 16 wherein the management command option calls a server status Web page from which the authenticated user may view server status information.